

**Contents:**

In the post-genomic era, every biologist is faced with the task of analyzing, interpreting and visualizing complex and huge data. An increasing number of scientists have begun writing small programs using script-based languages such as Perl or Python. This course is designed to train students and scientists without previous experience in programming who want -- or need -- to write their own bioinformatics software tools.

If you are interested in analyzing large amounts of biological data or are curious about typical bioinformatic activities such as sequence conversion and alignment, file parsing and data visualization, then this course will give you the opportunity to gain basic experience with Python.

**Learning goals:**

The aim of this training course is to provide an introduction to the Python programming language by solving everyday tasks of Bioinformatics.

**Prerequisites:**

The training course is aimed at young scientists such as PhD students and postdocs, but also at experienced scientists who want to learn Python programming.

**List of Topics:**

Strings, Lists, Dictionaries and Slicing.

Conditions, if-statements and for-loops.

Read, parse and convert bioinformatic file formats.

Implementing bioinformatics algorithms

**Tools:**

Colaboratory (<https://colab.research.google.com/>)

Please follow the course plan (course\_plan.pdf).

The course material is also hosted on GitHub:

[https://github.com/snowformatics/Bioinformatics/tree/master/python\\_course062022](https://github.com/snowformatics/Bioinformatics/tree/master/python_course062022)

